

Grand Glaize Creek

Water Body Segment at a Glance:

County: St. Louis
Nearby Cities: Valley Park and Fenton
Water Body ID: 2184
Length: 4 miles
Pollutants: Bacteria, Chloride,
and Low Dissolved Oxygen
Source: Urban Nonpoint Sources



State Map Showing Location of Watershed

Note: See Mercury information sheet for Mercury impairment

Scheduled for TMDL development: 2012-Bacteria, 2014-Chloride, 2015-Mercury, 2018- Low DO

Description of the Problem

Designated Beneficial uses of Grand Glaize Creek

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation – Category B

Uses that are impaired

- Protection of Warm Water Aquatic Life (Chloride and low DO impairments)
- Whole Body Contact Recreation – Category B (Bacteria impairment)

Standards that apply

- Missouri's Water Quality Standards at 10 CSR 20-7.031(4)(C) state that the *E.coli* bacteria count shall not exceed 126 colonies per 100 milliliters of water (126 col/100 mL) for Category A and 206 col/100 mL for Category B waters. This count is the geometric mean during the recreational season (April 1- October 31) in waters designated for whole body contact recreation.
- Numeric criteria for chloride are found in 10 CSR 20-7.031 Table A. The chronic criterion is 230 milligrams per liter (mg/L or parts per million) and the acute criterion is 860 mg/L.
- The numeric criterion for dissolved oxygen is found in 10 CSR 20-7.031 Table A. The dissolved oxygen, or DO, criterion is a minimum of 5 milligrams per liter (mg/L).

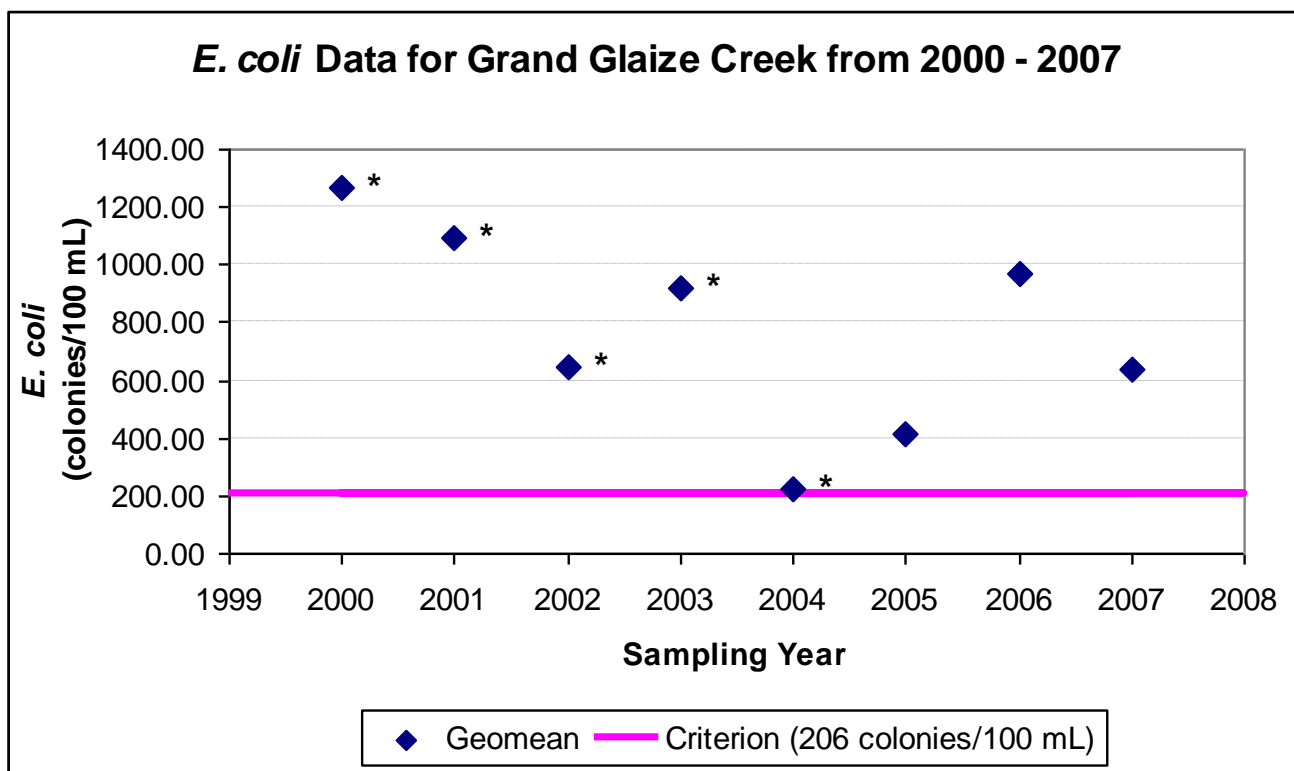
Background information and water quality data

Bacteria

Grand Glaize Creek is an urban stream in southern St. Louis County and is a tributary to the Meramec River. Grand Glaize Creek is designated for category B whole body contact recreation, which means it has places deep enough for total immersion (i.e., swimming), but these areas may be on private lands

or inaccessible to the public. Evidence of impairment is from *E. coli* data gathered by the U.S. Geological Survey, or USGS, from 2001-2007. The listing methodology states that, to be considered not impaired, a water body must meet the water quality criterion in each of the last three years of available data and that the geometric mean must consist of at least five data points within the recreational season. In Grand Glaize Creek, the recreational season geometric mean exceeded the category B criterion in 2005, 2006 and 2007.

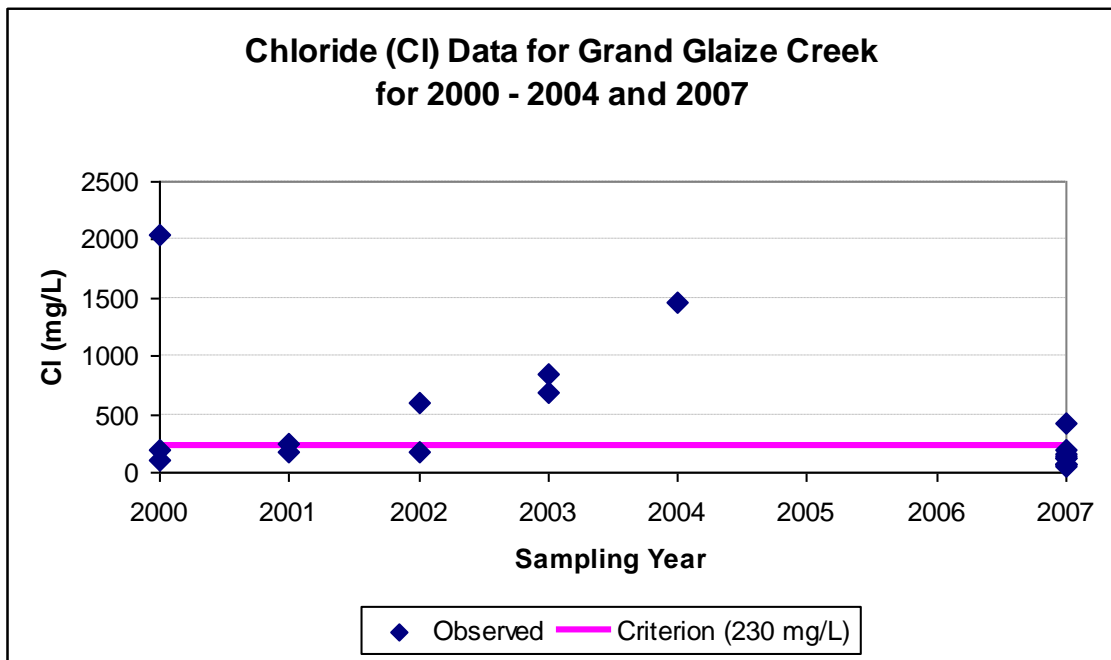
High counts of *E. coli* are an indication of fecal contamination and an increased risk of pathogen-induced illness to humans. Infections due to pathogen-contaminated waters include gastrointestinal, respiratory, eye, ear, nose, throat and skin diseases. *E. coli* are bacteria found in the intestines of warm-blooded animals and are used as indicators of the risk of waterborne disease from pathogenic (disease causing) bacteria or viruses. Most *E. coli* strains are harmless, but some can cause serious illness in humans and are occasionally responsible for product recalls. Missouri's whole body contact bacteria criteria are based on specific levels of risk of acute gastrointestinal illness. The level of risk correlating to the category B criterion is no more than 10 illnesses per 1,000 swimmers in fresh water (1 percent).



* = Geomean calculated using fewer than five (5) samples.

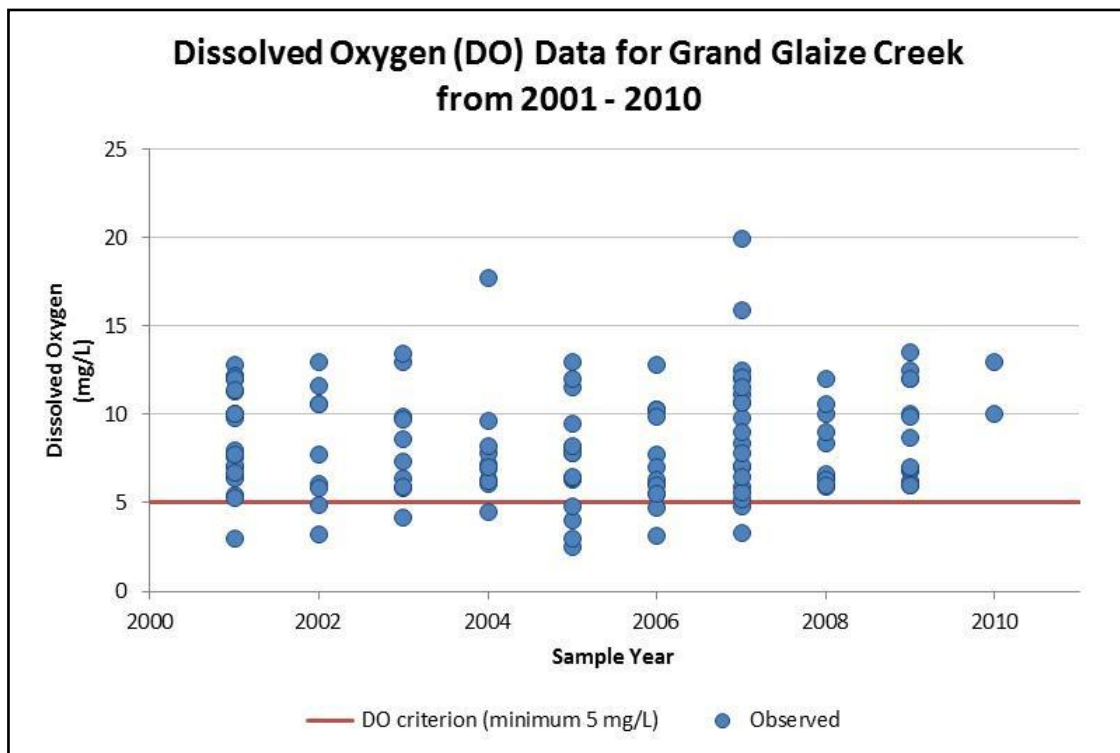
Chloride

Evidence for the chloride impairment is also from USGS data. The Listing Methodology stipulates that only one exceedance of the chloride criteria in the last three years of available data is necessary to constitute an impairment. Four samples from the last three years for which there is data (2007, 2004 and 2003) exceeded the chronic criterion.

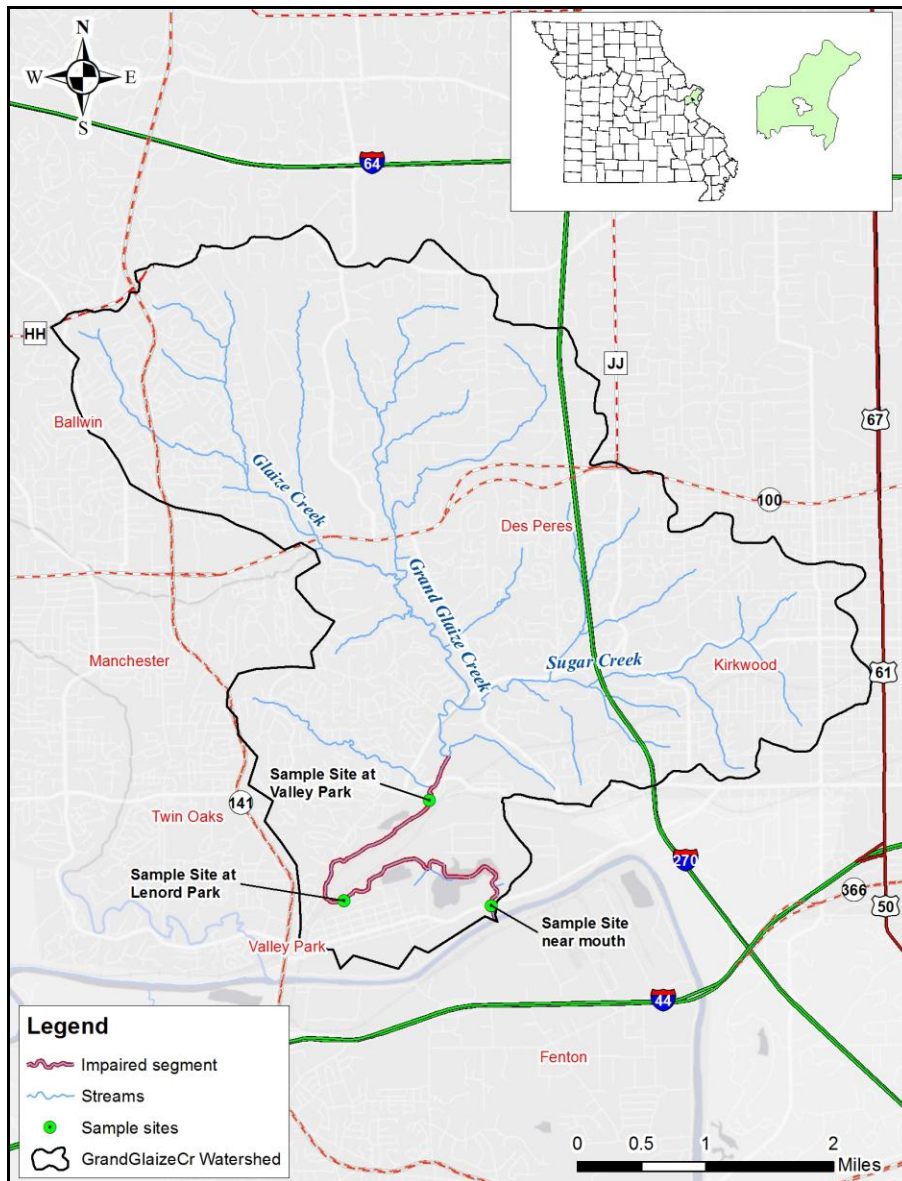


Low Dissolved Oxygen

Data showing dissolved oxygen values below the state’s criterion of 5 mg/L were collected by the USGS and the Metropolitan St. Lewis Sewer District. Greater than 10 percent of the dissolved oxygen measurements failed to meet or exceed the state’s criterion. Since this rate is greater than the allowable exceedance rate of 10 percent, this stream was judged to be impaired by low dissolved oxygen.



Map Showing the Grand Glaize Creek Watershed and Sample Sites



NOTE: The final Grand Glaize TMDL will be based on the most recent data and information.

For more information call or write:

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